## **ABSTRACT**

The present invention relates to a novel class of sulfonamides which are aspartyl protease In one embodiment, this invention relates to a novel class of HIV aspartyl protease inhibitors characterized by specific structural and 5 physicochemical features. This invention also relates to pharmaceutical compositions comprising these compounds. The compounds and pharmaceutical compositions of this invention are particularly well 10 suited for inhibiting HIV-1 and HIV-2 protease activity and consequently, may be advantageously used as antiviral agents against the HIV-1 and HIV-2 viruses. invention also relates to methods for inhibiting the activity of HIV aspartyl protease using the compounds of this invention and methods for screening compounds 15 for anti-HIV activity.